

damage was at least \$100,000. Two persons were killed and five injured. Considering the destruction at Cornland, it is remarkable that there were no more casualties. After leaving Cornland the path lay south of Lake Fork, just at the south edge of Mount Pulaski, through Chestnut, at the north edge of Clinton, within 1 mile of the courthouse. The tornado passed through one corner of Le Roy, causing a loss of \$100,000, including the damage to the high-school building; then it moved on between Arrowsmith and Saybrook. A number of persons were injured in the Le Roy school building. Two persons were killed near Mount Pulaski. At Chestnut it damaged property \$60,000, including \$10,000 loss to a modern two-story brick school; two of the pupils were killed. A farmer lost his life in De Witt County.

Perhaps the most peculiar feature of this tornado was the manner in which it just missed cities and towns along its course, as indicated in the table below (Table 1). The tri-State storm of 1925 acted in a very different manner. Had the recent storm passed through the centers of population listed in the table, the deaths and losses would have been several times greater.

TABLE 1

Place	Population (1920)	Distance from (miles)
Hardin.....	604	1 1/2
Carrollton.....	2,020	1 1/2
Waverly.....	1,510	1 1/2
Loami.....	462	1 1/2
Springfield.....	59,183	1 1/2
Riverton.....	1,916	(2)
Lake Fork.....	100	1 1/2
Mount Pulaski.....	1,510	1 1/2
Clinton.....	5,988	3 1/2

¹ From city limits.

² Passed over part of Riverton, but struck northeast corner.

³ One mile from courthouse.

The path of the tornado varied in width from 200 to 2,000 feet. In some parts of its course a funnel-shaped cloud was reported. A State official, from the sixth floor of the capitol building, saw a distinct funnel cloud, lifting from the ground at times. In the suburbs of Springfield, where the path was narrow, a witness, one-half block from the path, saw a small funnel cloud. At Buffalo Hart and Cornland, where the path was wide, we could find no one who observed such a cloud. They spoke of boiling dark clouds, and some mentioned a cloud "rolling toward them." In connection with the May, 1917, and March, 1925, tornadoes¹ the writer suggested

¹ See MONTHLY WEATHER REVIEW, June, 1917, 45:294; August, 1924, 52:396; November, 1924, p. 542; April, 1925, 53:144.

that the cloud was so close to the earth there was no room for the usual pendant portion. Here we have: Narrow path—funnel cloud; wide path—no funnel cloud. Hail fell in connection with the storm.

The direction of movement was northeast 7° east, and there were only slight variations from that direction. In part, the time of passage was secured from train dispatchers, being the time the wires went out. It passed Hardin about 12:00 noon; Wrights, about 12:25 p. m.; Waverly, 12:50 p. m.; Springfield, about 1:10–1:15 p. m.; Buffalo Hart, 1:27 p. m.; Cornland, 1:30 p. m.; Clinton, 1:55 p. m.; Sibley, about 2:30 p. m. Some of these times are approximate, but using those that are believed to be exact it is found that the average velocity of translation, on a direct course, was 60 or 61 miles per hour. The Mattoon tornado of 1917 traveled at 40 miles per hour, and the great 1925 storm at 59 miles per hour.

The storm was continuous over much of its track, but there was some lifting and skipping. There were not many evidences of explosive force. At Buffalo Hart and Cornland trees and debris lay mostly to the northeast and north. In many cases, however, they lay to the southeast, and this appeared to be where the damage was most severe. We found no trees lying in the direction from which the storm had come. This storm lacked the severity of the great tornado of March, 1925. At Cornland we saw a 1 by 5 board driven well into a window casing. A private garage was entirely destroyed and carried away, but a new car was not moved or even scratched; near Le Roy a barn was carried away, but the horses, tied to the manger, were left standing and unhurt. Debris fell at Alexander, 10 miles to the left of the storm track.

The subjoined table (Table 2) is a statement by counties of the deaths, the number injured, and the property losses.

TABLE 2

County	Deaths	Known injured	Orchard loss	Other property
Lincoln, Mo.....	0	12	\$1,000	\$20,000
Calhoun.....	2	21	15,000	35,000
Greene.....	8	23	None.	200,000
Macoupin.....	0	3	4,000	100,000
Morgan.....	0	4	2,500	100,000
Sangamon.....	4	22	6,000	183,000
Logan.....	6	14	-----	247,000
De Witt.....	1	9	1,000	200,000
McLean.....	0	15	10,000	210,000
Ford.....	0	-----	Minor.	35,000
Total.....	21	123	39,500	1,330,000

TORNADOES IN ARKANSAS, 1879–1926

By HARVEY S. COLE

[Weather Bureau, Little Rock, Ark.]

SYNOPSIS

The article presents three tables: One showing the place, date, and certain statistics regarding 225 tornadoes which occurred in Arkansas from 1879 to 1926; one showing the distribution of tornadoes by months and years; one showing the number of tornadoes by months from 1908 to 1926, the number of thunderstorms in Little Rock for the same period, and a comparison of tornadoes in Arkansas and thunderstorms at Little Rock. A chart showing the distribution of tornadoes over the State is given with arrows showing the direction of tornadoes at Fort Smith, Little Rock, Heber Springs, and Hot Springs.

The chart and tables are discussed, also some of the larger features of topography and their probable effect on the courses and

distribution of tornadoes. It is pointed out that tornadoes usually form in the southeastern portion of the low and move northeastward; and reasons are given for the movement of some tornadoes in other directions and for the occurrence of tornado families.

Records of meteorological data in Arkansas before 1879 are very scarce, and if there are any concerning tornadoes before that date the writer has not been able to find them. Table 1 includes the place, date, time, width of path, direction from which the storm came, the number killed and injured, and all obtainable estimates of the value of the property destroyed for all tornadoes in Arkansas of

which we have a record for the years 1879 to 1926. Table 2 gives the number of tornadoes by months and for years, also totals at the bottom for the entire number of years and for the years 1908 to 1926. Table 3 gives the tornadoes by months for the period 1908 to 1926, the number of thunderstorms at Little Rock by months for the same period, the number of thunderstorms per tornado, and the number of tornadoes per year for each month of the year.

The data for Table 1 were obtained from the Daily Journal at Little Rock, Finley's Tornado Studies of 1884, Finley's Character of 600 Tornadoes, and Climatological Data for Arkansas. The table includes a record of tornadoes at 225 different towns or communities from 1879 to 1926. In some instances one tornado passed through several towns, all of which are named, in others the tornado passed through several towns or communities and only one of them is named. From 1908 to 1926 the record is fairly complete, but it is thought that before that time only a small portion of them were recorded. None was recorded from 1888 to 1891 or from 1902 to 1907. From 1879 to 1907 the average number per year was 1.1, from 1908 to 1926 it was 10.1 per year, indicating that the earlier record was incomplete. It is thought that the entire record should be used in determining the distribution by months, but only the record from 1908 to 1926 should be used in determining the number per year.

No regularity in the annual number of tornadoes is found. In 1908 there were 11; in 1909, 27; in 1910, none; in 1911, 2; in 1912, 11, etc.

In the tabulation of tornadoes by months we find the numbers rather large in November, March, and April and June, small in the remaining months. The greatest number for any month for the 48-year period is 52 in March, 51 being reported in April, 45 in November, and 39 for June.

It is evident from Table 3 that the number of tornadoes for the different months does not vary as the number of thunderstorms at Little Rock.¹ Tornadoes are frequent from February to June, few in other months; thunderstorms are frequent from March to September. Thunderstorms nearly always occur with tornadoes, but tornadoes are rare from July to October, while thunderstorms are more frequent in July than in any other month, the numbers being large for the other three months. The number of tornadoes in Arkansas and the number of thunderstorms at Little Rock for March and April were charted for the years 1908 to 1926 and lines drawn through the dots. A decided relation was found, the lines nearly always rising and falling together. There were six years from 1908 to 1926 with no tornadoes in these months, the number of thunderstorms being less than the average in five of them. Six of the seven years having more than the average number of tornadoes had more than the average number of thunderstorms.

The places at which tornadoes have been reported from 1879 to 1926 have been represented as nearly as practicable by dots on a map of Arkansas in Figure 1, two or more dots being placed near together when two or more tornadoes were reported at the same place. In places where a tornado traveled a long distance a line has been drawn.

We find that more tornadoes have been reported in the more densely populated sections than elsewhere. There are three rather large areas with few dots, one in the northern mountainous portion, one in the mountains south of the Arkansas River, and one in the level portion

in the southeast. All of these areas are sparsely populated. The low, level area east of the highlands from the Arkansas Valley northward is well covered with dots. For the lack of reports of tornadoes farther south there seems to be no reason except the lack of population.

Four dots appear at Fort Smith and Little Rock, three at Heber Springs, Hot Springs, Jonesboro, Ozark, Piney, Stuttgart, and Texarkana. Fort Smith is west of the Ozarks, Little Rock just east of the foothills. Heber Springs, Hot Springs, Ozark, and Piney are in the mountains, Jonesboro, Stuttgart, and Texarkana are in the lowlands where contour can have no effect. Six of the places having three or more tornadoes are in the mountains or the edge of the foothills; only three in level country.

Arrows have been drawn to indicate the direction of the paths of four tornadoes at Little Rock, in Figure 1. The tornado of October 2, 1894, moved directly from the west through the business section. The other three moved from the southwest, the ones of June 5, 1916, and May 14, 1923, being about 4 miles west of the business district, the one of December 8, 1885, about 2½ miles west. The storms of 1916 and 1923 were so near each other that they overlapped throughout most of their length. As nearly as we can learn all of these storms stopped near the river bank, this being the only indication of the effect of contour on the courses of the storms.

Arrows have been drawn in Figure 1 showing the direction of the paths of four tornadoes at Fort Smith. The one of June 27, 1879, came from the northwest, passing through the business district. The tornadoes of January 12, 1898, May 28, 1924, and April 23, 1926, came from the west, two of them passing through the business district, the third through the northern edge of the city, 2 miles from the business center. Tornadoes in Arkansas and Oklahoma nearly always move from southwest to northeast, but three of those at Fort Smith are from the west and one from the northwest. In this connection attention is called to the fact that the prevailing winds at Fort Smith are from the east throughout the year. At nearly all stations in Arkansas the prevailing winds are from some southerly direction during the warmer months, from the north or northwest during the remainder of the year. It is pretty well established by Mr. T. G. Shipman and others that the unusual direction of the wind at Fort Smith is due to contour—not the little local hills, but to Boston Mountain to the north, and passes between Mount Magazine and other mountains to the south and east. Boston Mountain extends nearly east and west for nearly 100 miles. It rises abruptly just north of the Arkansas River to an elevation of 2,000 feet or more throughout nearly its length, forming an abrupt barrier to southerly winds. Many more dots are found to the south and around the east and west ends of this mountain than just north of it, indicating that the mountain has some effect on the courses of the tornadoes.

Arrows in Figure 1 indicate the direction of three tornadoes at Heber Springs. All of these came from the west-southwest, each one coming slightly nearer the business district, the paths of the three overlapping each other. Their direction is not quite the same as that of most tornadoes in Arkansas, and the one of November 25, 1926, changed its course slightly, as it came from Greenbrier, due southwest of Heber Springs. The three storms passed over nearly the same spot in 17 years, moving in nearly the same direction. It is thought that currents from the southwest striking a sharp ridge like Boston Mountain would be deflected toward the east, the currents up to 2,000 feet or more being affected.

¹ This is true for the southern and southeastern States in general.—Ed.

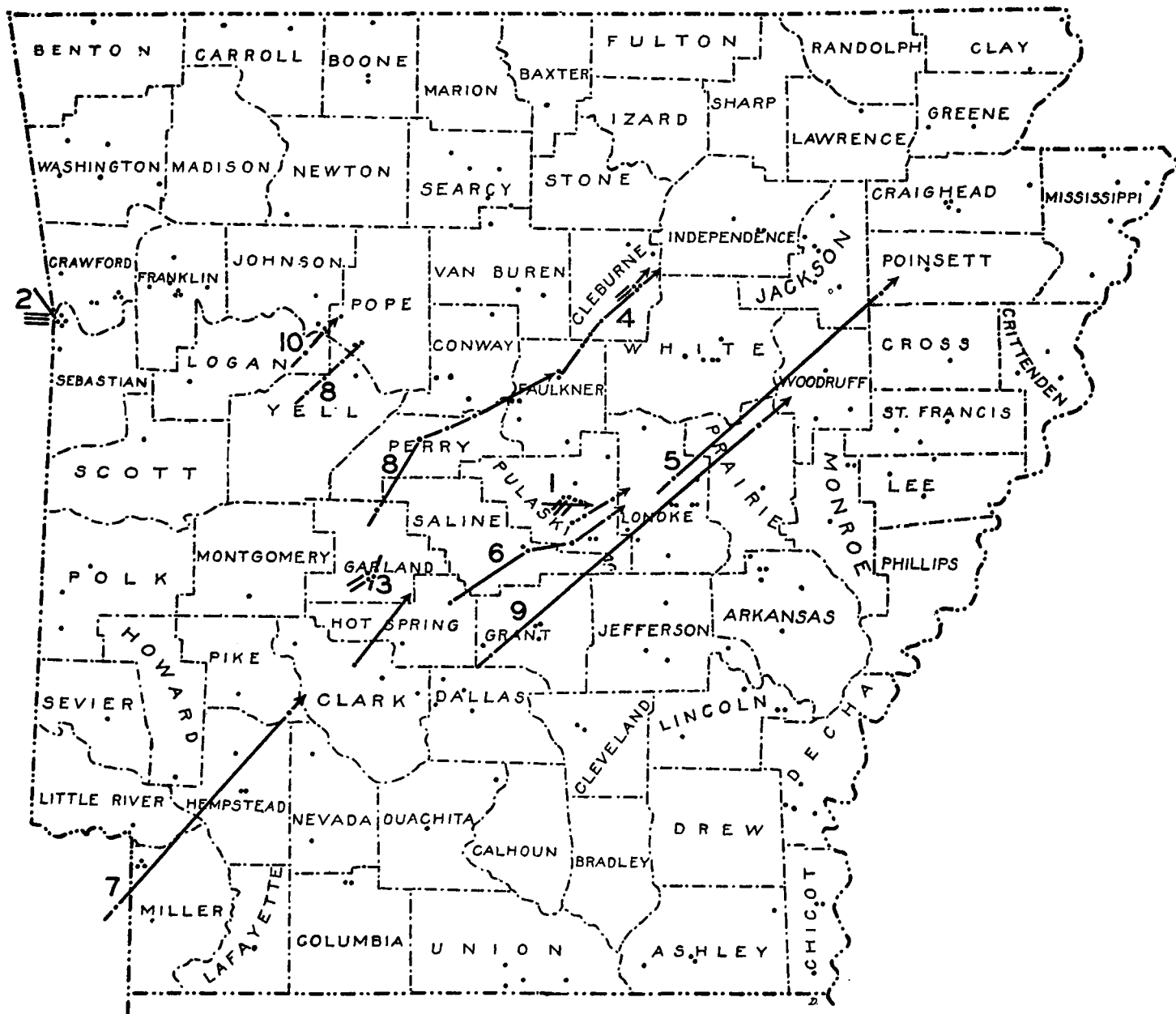


FIG. 1.—Tornadoes in Arkansas, 1879-1926

Key numbers for tornado tracks:

1. Tornadoes, Little Rock, December 8, 1885, October 2, 1894, June 5, 1916, and May 14, 1923.
2. Tornadoes, Fort Smith, July 7, 1894, January 12, 1898, May 28, 1924, May 23, 1926.
3. Tornadoes, Hot Springs, November 25, 1915, June 5, 1916, and September 9, 1924.
4. Tornadoes, Heber Springs, April 29, 1909, June 5, 1916, and November 25, 1926.
5. Tornado, McCreanor to Waldenberg, February 23, 1909.
6. Tornado, Malvern to Galloway, March 8, 1909.
7. Tornado, Mineola, Tex., to Mount Pisga Settlement, Ark., April 17, 1921.
8. Tornadoes, Belleville to Mars Hill, Greenbrier to Heber Springs, and Jessierville to Greenbrier, November 25, 1926.
9. Tornado, Leola to Des Arc, December 26, 1916.
10. Tornado, Mickles to Piney, April 18, 1920.

This would probably deflect tornadoes somewhat to the east of the courses they would otherwise have followed. Dots are much more numerous just east, south, and west of Boston Mountain than they are north of it, which seems to bear out this opinion. It is probable, however, that Heber Springs is in no more danger of being in the path of a tornado than any other town in that section of the country.

Arrows in Figure 1 also represent the paths of three tornadoes at Hot Springs. The one of November 25,

1915, came from a little west of south. It was a severe storm, doing great damage. Two men stood on North Mountain and watched it moving up the valley toward Hot Springs. The balloon-shaped cloud moved steadily forward to the edge of town, the ropelike spout swaying from side to side as it approached. After reaching the edge of town it changed its course a little more toward the northeast. It crossed a series of ridges and ravines. As it moved up the side of a ravine the lower end of the spout was ground off, but it built downward as it moved

down the next slope, reaching the ground again as it started up the next; this was repeated several times. When the spout reached the ground the débris would fly, when it started down the next slope the débris would fall out, but little damage was done until it started up the next slope. The same was noted in the storm at Heber Springs of November 25, 1926. A dwelling stood in a ravine across which the tornado passed. The upper portion of the house was entirely destroyed, but the lower story was left standing nearly intact. The tornado at Hot Springs may have changed its course because of the mountains in front of it, but it crossed Indian Mountain a few miles northeast of Hot Springs. The storms of June 5, 1916, and September 29, 1924, were from the southwest and passed through the central portion of the town, but they were small, doing but little damage.

The direction of movement of 123 tornadoes is given in Table 1. One hundred and two of these were from the southwest, 13 from the west, 4 from the northwest, 2 from the south, 1 from the north, and 1 from the northeast, the only directions not represented being the east and southeast. The numbers of tornadoes from the different directions as shown in the charts in the annual report of the chief of the bureau seem to have nearly the same distribution.

Tornadoes are nearly always formed in the southeastern quadrant of the low and follow courses slightly to the right of the isobars. Several tornadoes frequently form along the edge of the cold current that causes them. The current follows the isobars, but the eastward movement of the low gives them a northeastward movement with parallel paths, thus forming tornado groups or families. Thus tornadoes were reported in five localities on April 18, 1880, in 11 on November 23, 1908, in 13 on March 8, 1909, in 7 on April 29, 1909, in 12 on March 20, 1913, in 34 on June 5, 1916, and in 27 on November 25, 1926. The cold currents come far enough south to cause tornadoes in Arkansas from November to June, but very few have been recorded in other months. As the season advances and the courses of highs and lows move northward; the area of tornado activity also moves northward.

The approximate time of occurrence is given for 140 of the tornadoes in Table 1. One hundred and seven of

these occurred from noon to midnight, 30 from midnight to noon, and 69 from 3:00 p. m. to 8:00 p. m. From 6:00 p. m. to 8:00 p. m. seems to be the time of greatest frequency, 38 being recorded in those two hours, 35 being reported from 5:00 p. m. to 7:00 p. m., 31 from 4:00 p. m. to 6:00 p. m., and 25 from 3:00 p. m. to 5:00 p. m.

The number of persons killed in Arkansas by tornadoes in the past 48 years as shown in the table is 549, or 11.4 per year. The number reported injured in that time was 2,246, and the value of the property destroyed over \$6,000,000. A glance at the table will show that these numbers are probably far short of what actually occurred, especially the number of injured and the value of property destroyed.

The average width of the paths reported is about 630 feet. Their lengths can not be determined with any certainty from the few reported, but they seem to be usually only a few miles long. In tornado groups, several storms doubtless form near the same time, one northeast of the other. It is likely that the ones that form first die out first, the later ones successively increasing and then decreasing in intensity. This would give them such a distribution as we find in the storms of June 5, 1916, and November 25, 1926.

CONCLUSIONS

The distribution of tornadoes in Arkansas appears to be rather even except on the northern side of the higher mountains, where few have been reported.

Small features of topography offer some protection to buildings when located behind hills or in ravines across which the tornado passes. Protection should be against storms coming from the southwest or west. Special care should be taken in November and March to June. Large topographic features, such as mountains rising abruptly 1,000 feet or more in front of tornadoes, seem to divert their courses.

It is thought that one small town is no more apt to be in the path of a tornado than any other in that general section of the country, but that towns north of Boston Mountain are not as apt to be in the path of such a storm as towns east, south, and west of that mountain.

TABLE 1.—Tornadoes and tornado groups in Arkansas, 1879-1926

Place	Date	Hour	Width	From—	Killed	Injured	Damage
			<i>Feet</i>				
Fort Smith	June 27, 1879	P. m.		N-NW			Several houses.
Washington County	Apr. 18, 1880	8:30 p. m.	200	SW	2	20	\$100,000.
Franklin County	do	6:40 p. m.		SW			Great damage.
Eureka Springs	do	P. m.		SW			18 houses destroyed.
White County	do	8 p. m.	1,200	SW	10	20	
Dardanelle	do	8 p. m.		SW			Town partly destroyed.
Monroe County	Apr. 12, 1881	2 p. m.		SW			
Franklin County	Apr. 13, 1883	11:00 p. m.		SW	4	Few.	\$22,000.
Conway	Apr. 14, 1883	3:15 p. m.		NE	0	3	\$50,000.
Fort Smith, 15 miles SW. of	July 7, 1884	8:20 p. m.		NW			
Searcy	May 5, 1884				0	1	Several buildings.
Little Rock	Dec. 8, 1885	P. m.	150	SW	0	0	\$250.
Ozark	Apr. 22, 1887						Destructive.
Durham	Nov. 16, 1892				0		Much damage.
Harrison	do				3		Do.
Fayetteville	Apr. 19, 1893				0		Do.
Ozark	do				0		Do.
Little Rock	Oct. 2, 1894	8:28 p. m.	300	W	4	26	\$150,000.
East Jefferson County	Oct. 29, 1896				0		Much damage.
Benton	Jan. 2, 1897	7 p. m.		SW	1		\$50,000.
Cameron	do				1		
Hope	Mar. 2, 1897						Considerable damage.
Cleveland County	Mar. 31, 1897						Much damage.
Grady	do						Do.
Fort Smith	Jan. 12, 1898	12:08 a. m.	600	W	52	44	\$450,000.
Alma	Jan. 11, 1898	11 p. m.	600	W	0	0	\$2,000.
Batesville	July 2, 1898	1 p. m.			1	3	One building destroyed.
Robroy	Mar. 1, 1899	A. m.	100	NW	1		\$2,500.
Forest City	Mar. 9, 1901						
Rockyhill	do						
Osceola	do				16		
Texarkana	do						
Washington	do						

TABLE 1.—Tornadoes and tornado groups in Arkansas, 1879-1926—Continued

Place	Date	Hour	Width	From—	Killed	Injured	Damage
			<i>Feet</i>				
Watulla	Nov. 23, 1908			SW	14		
Jethro	do			SW	2		
Potter	do			SW	1		
Mulberry	do			SW	1		
McNeil	do			SW	0		
Berryville	do			SW	0		
Piney	do			SW	0		
London	do			SW	0		\$100,000.
Canfield	do			SW	0		
Walcott	Nov. 25, 1908	3:30 p. m.	450	SW	1	5	\$20,000.
Lorado	do	4 p. m.	300	SW	1	4	\$30,000.
Hamburg	Feb. 5, 1909	8 a. m.			0	0	\$6,000.
Stuttgart	do	8 a. m.			2	0	\$15,000.
McCreanor to Waldenberg	Feb. 23, 1909	2 a. m.	5,000	SW	9	107	\$106,300.
Alexander Farm	Mar. 8, 1909	7 p. m.		SW			
Brinkley	do	7 p. m.		SW			
England	do	7 p. m.		SW			
Princeton	do	7 p. m.		SW	55	625	\$608,000.
Hazen	do	7 p. m.		SW			
Sheridan	do	7 p. m.		SW			
Witherspoon	do	8 p. m.		SW			
Malvern	do	8 p. m.		SW			
Gilford	do	8 p. m.		SW			
Benton	do	8 p. m.		SW	10	50	\$30,000.
Brooks	do	8 p. m.		SW			
Fourch Dam	do	8 p. m.		SW			
Galloway	do	8 p. m.		SW			
Hunter	Apr. 6, 1909	12:10 p. m.	1,300	SW	0	0	\$2,000.
Cotton Plant	do	1 p. m.		SW			\$5,000.
Catcher	Apr. 29, 1909	4:40 p. m.		SW			
Piney	do			SW			
Heber Springs	do			SW			
Palestine	do			SW	10	148	\$178,000.
Crawfordsville	do			SW			
Caddo Gap	do			SW			
Marianna	do			SW			
Mena	Apr. 13, 1911	9:15 p. m.	300	W			\$30,000.
Wooster	Apr. 14, 1911	1 a. m.			3		
Arkansas, Lee, and St. Francis Counties	Feb. 25, 1912				18		\$100,000.
Star City	Apr. (?), 1912						
Kee	do						
Lutherville	do						
Fouk	do				2	13	Considerable.
McGehee	do						
Loneburg	do						
Junction	do						
Booneville	Aug. 3, 1912	11:45 p. m.	Few.	SW	0	6	\$60,000.
Caledonia	Mar. 13, 1913						
Hibank	do	9 a. m.	300		1	47	\$24,000.
Blanchard Spring	do						
Hoxie and Walnut Ridge	Mar. 20, 1913	9:30 a. m.					
Brinkley	do	9:30 a. m.					
Wynne	do	9:30 a. m.					
Jonesboro	do	9:30 a. m.					
Nettleton	do	9:30 a. m.					
McGehee	do	9:30 a. m.			1	8	\$111,000.
McArthur	do	9:30 a. m.					
Newport	do	9:30 a. m.					
Pine Bluff	do	9:30 a. m.					
Eudora	do	9:30 a. m.					
Gilbert	do	9:30 a. m.					
Paragould	do	9:30 a. m.					
Harrisburg	Mar. 24, 1913	Midnight					
Rumley	do	Midnight			3	13	\$16,000.
Powers	do	Midnight					
Leslie	do	Midnight					
Murfreesboro	Apr. 27, 1914	4:15 p. m.			1	14	\$25,000.
Bodcaw	Nov. 25, 1915	3:30 p. m.			1	14	\$25,000.
Hot Springs	do	3:15 p. m.	100	SW	10	45	\$300,000.
Almond	June 5, 1916				0	55	
Alvis	do				0	1	\$500.
Baucum	do	5:30 p. m.		SW	1	5	\$10,000.
Branner	do	4:30 p. m.		SW	4	1	
Barney	do	4 p. m.	150		4	4	\$8,000.
Bee Branch	do			W	0	0	\$5,000.
Blackville	do				1		Several.
Cabot (near)	do	5:15 p. m.	1,000	SW	2	22	\$15,000.
Carlisle	do	6:15 p. m.	900	SW	0	3	\$1,200.
Carthage	do	5 p. m.	600	SW	0	0	
Cato	do	Day			0	5	Several houses.
Dalark	do	5 p. m.	5,000	SW	5	3	\$5,000.
Dark Corner	do	6:30 p. m.			1	0	\$10,000.
De Valls Bluff	do	6:20 p. m.		SW	0	0	
Greenland	do	2:30 p. m.	200	SW	1	16	\$20,000.
Hamburg	do	Night			0	4	Several buildings.
Haynes	do	8 p. m.			4	40	\$3,000.
Hazen	do	8:30 p. m.	1,000	SW	4	42	\$6,000.
Heber Springs	do	4:15 p. m.	900	SW	20	150	\$51,000.
Hot Springs	do	2:15 p. m.	600	SW	4	8	\$25,000.
Imboden	do						Several.
Judsonia	do	5:30 p. m.	1,000	S	9	35	\$20,000.
Little Rock	do	5 p. m.	500	SW	0	0	\$5,000.
Marion	do	3 a. m.	1,000	SW	1	60	\$5,000.
Morrilton	do	2:45 p. m.	2,000	SW	1	6	\$22,000.
Nix	do	2 p. m.	5,000	SW	3	8	\$5,000.
Ozark	do	1:30 p. m.	3,000	SW	1	1	\$8,000.
Rector	do				5	2	
Sheridan	do	4:50 p. m.	3,000	SW	0	0	\$2,000.
Stuttgart (near)	do				8	30	
St. Francis	do	8 p. m.	300	SW	5	6	\$20,000.
Tuckerman	do	6:30 p. m.	300	SW	4	10	\$50,000.
Vallier	do	Night			2	6	
Vandule	do	8 p. m.	1,000	SW	0	4	\$6,000.
Lake Village	Dec. 20, 1916				0	1	Slight.
Leola to Des Arc	Dec. 26, 1916			SW	17		\$100,000.
Clark, Dallas, and Grant Counties	Mar. 20, 1917			SW	6	Several.	Much damage.

TABLE 1.—Tornadoes and tornado groups in Arkansas, 1879-1926—Continued

Place	Date	Hour	Width	From—	Killed	Injured	Damage
			<i>Feet</i>				
Melwood	Mar. 31, 1917				1	Several.	Several homes.
Bellville	do				1		Do.
Manilla	May 27, 1917				6	5	\$12,500.
Archillion	do						
Clear Lake	do				12	55	\$43,000.
Cotton Wood Point	do						
Harrison	June 5, 1917	10:30 p. m.	225		0	0	\$15,000.
Wrightsville to Olena	June 6, 1917	7 p. m.		NW	0	0	\$73,000
Uniontown	June 7, 1917	Midnight		N	2		\$4,000.
Newport	Apr. 3, 1918	5 p. m.	150		1	2	\$2,500.
Kenset	Apr. 17, 1918		600	SW	0	10	\$32,000.
Tupelo	do	1 a. m.	1,000	SW	0	5	\$40,000.
Jonesboro	do	2 a. m.		SW	0	0	Slight.
Keo	do	1:15 a. m.			0	0	\$3,000.
Amity	do	11:30 p. m.	2,000	W	0	10	\$4,000.
Hope	Apr. 19, 1918			W	0	0	All crops.
Jelks	do	1:30 a. m.	1,000	SW	0	0	Slight.
McNeil	Apr. 27, 1918	10 p. m.	200	SW	0	0	\$30,000.
Mulberry	May 10, 1918		1,000	SW			\$8,000.
Altus	Mar. 16, 1919				0	9	\$40,000.
Texarkana	Apr. 9, 1919				2	15	\$10,000.
Saratoga	do				4	17	\$25,300.
Ogden	do				2	15	\$25,000.
Mickles to Piney	Apr. 18, 1920	Midnight	1,000	S	18	32	\$100,000.
Oil Trough Bottom	Mar. 17, 1921				0	9	\$10,000.
Mineola, Tex., to Mount Pisgah Settlement	do		2,000	SW	51		\$1,175,000.
Yell and Pope Counties	Apr. 15, 1921	3:30 p. m.			5		\$60,000.
Marche	do	8:45 p. m.					\$12,500.
Wrightsville	do	8:45 p. m.			0	0	
Carlisle	Apr. 26, 1921	A. m.			0	0	\$10,000.
Gould	do	A. m.			0	0	\$10,000.
Oil Trough	Sept. 7, 1921	7 p. m.					Few houses.
Wicks	Nov. 17, 1921			W	8	39	
De Gray	do			SW	3		\$20,000.
Clarkdale	Dec. 23, 1921	4 p. m.			6	15	\$150,000.
Fallsville	Jan. 4, 1922	5 a. m.			3	2	\$2,000.
Jacksonville	Jan. 7, 1922	9 a. m.			2		\$5,000.
Arkansas City	Mar. 14, 1922				1	10	\$15,000.
Kensett	do	A. m.			1	3	Slight.
Gethsemane	do	A. m.			6	8	\$40,000.
Crossett	Mar. 20, 1922				0	0	\$5,000.
Prescott	Mar. 30, 1922				0	0	Slight.
Little Rock	May 14, 1923	8 p. m.	500	SW	0	0	\$70,000.
Sevier County	do			SW			Several thousand.
Jonesboro	June 27, 1923						\$7,000.
Texarkana	Apr. 29, 1924	2:30 p. m.	300	SW	1	17	\$25,000.
Washington County	May 28, 1924	6:30 p. m.			1		Hail, \$100,000.
Fort Smith	do	Midnight		W	0	0	\$25,000.
Hot Springs	Sept. 9, 1924	3 p. m.	200	SW	0	0	\$100,000.
Beedeville	Dec. 7, 1924	4:50 p. m.			3	1	
Mulberry	Feb. 8, 1925				0	0	\$20,000.
Bearden	Feb. 22, 1925				0	0	
Stuttgart	do				0	0	\$15,000.
Blytheville	Nov. 26, 1925	2:30 p. m.	300	W	0	1	\$4,000.
Marshall	Dec. 3, 1925	11 p. m.	150	SW	0	0	\$3,500.
Lake Village	Feb. 24, 1926	8 p. m.	300	SW	5	15	\$70,000.
Hiwassee	Apr. 23, 1926	5 p. m.	1,000	W	0	0	\$3,000.
Fort Smith	May 23, 1926	7:30 p. m.		W	0	0	\$25,000.
Wilson	Aug. 17, 1926		300	SW	2	11	
Aplin	Nov. 25, 1926			SW	0	3	\$6,000.
Arkadelphia	do	6:30 p. m.		SW	0	3	\$5,000.
Belleville	do	4:30 p. m.	300	SW	1	3	\$20,000.
Buford	do				0	0	\$20,000.
Choctaw	do		400	SW	3	2	\$3,000.
Crow Mountain	do	5:15 p. m.	300	SW	1	7	\$9,500.
Enders	do	6 p. m.	1,300	SW	1	6	\$25,000.
Float Creek	do	P. m.			0	3	\$10,000.
Gould	do	P. m.		SW	3	25	\$20,000.
Greenbrier	do	5 p. m.		SW	0	0	None.
Do	do	6 p. m.	300	SW	0	1	\$6,000.
Jacksonport	do	7:30 p. m.		SW	2	1	\$9,000.
Heber Springs	do	6 p. m.	900	W-SW	20	75	\$400,000.
Jessieville	do	7:30 p. m.			0	0	\$5,000.
Macedonia	do				2	0	\$15,000.
Mars Hill	do				1	0	\$4,000.
Moscow	do	7:30 p. m.	300	SW	10	66	\$20,000.
Old Hickory	do			W	1	0	\$10,000.
Opello	do	5:15 p. m.	300	SW	5	7	\$1,000.
Pearson	do	5:30 p. m.	1,200	SW	0	0	\$9,000.
Perry	do	5:20 p. m.	200	SW	0	0	\$2,500.
Portland	do	9:30 p. m.	300	SW	0	2	\$3,000.
Quitman	do	5:15 p. m.	300	SW	0	0	\$4,000.
St. Vincents	do				0	0	\$8,000.
Sheridan, near	do		300	W-SW	1	5	\$6,000.
Stafford	do	4:45 p. m.	300	SW	0	0	\$5,500.
Wooster	do	6 p. m.	180	SW	0	0	\$500.

TABLE 2.—Monthly numbers of tornadoes in Arkansas, 1879 to 1926, with annual totals

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
1879						1							1
1880				5									5
1881				1									1
1882													0
1883				2									2
1884					1		1						2
1885												1	1
1886													0
1887				1									1
1888													
1889													
1890													
1891													
1892										2			2
1893				2									2
1894										1			1
1895													0
1896										1			1
1897	2		3										5
1898	2						1						3
1899			1										1
1900													0
1901			5										5
1902													
1903													
1904													
1905													
1906													
1907													
1908											11		11
1909		3	13	9									25
1910													0
1911				2									2
1912		1		7				1					9
1913			19										19

TABLE 2.—Monthly numbers of tornadoes in Arkansas, 1879 to 1926, with annual totals—Continued

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
1914				1									1
1915											2		2
1916						34						2	36
1917			3		4								10
1918				9	1	3							10
1919			1	3									4
1920				1									1
1921			1	6					1		2	1	11
1922	2		5										7
1923					2	1							3
1924				1	2				1				5
1925		3									1	1	5
1926		1	1	1				1			27		31
Total, 1879-1926	6	8	52	51	10	39	2	2	2	2	45	6	225
Total, 1908-1926	2	8	43	40	9	38	0	2	2	0	43	5	192

TABLE 3.—Tornadoes in Arkansas and thunderstorms in Little Rock, 1908 to 1926

	January	February	March	April	May	June	July	August	September	October	November	December
Number of tornadoes.....	2	8	43	40	9	38	0	2	2	0	43	5
Number of thunderstorms.....	26	47	89	134	123	176	179	154	93	44	41	25
Number of thunderstorms per tornado.....	13.0	5.9	2.1	3.4	13.7	4.6	77.0	46.5	46.5	1.0	1.0	5.0
Number of tornadoes per year.....	.11	.42	2.26	2.11	.47	2.00	0	.11	.11	0	2.26	.26

THE ROCKSPRINGS, TEXAS, TORNADO, APRIL 12, 1927

By J. H. JARBOE

[Weather Bureau, San Antonio, Tex., Apr. 20, 1927]

The low-pressure area that passed over Texas from April 11 to 13 caused an unusual number of destructive storms. Reports of lives lost and property damaged ranged from Del Rio to Texarkana, across a section of Texas seldom visited by tornadoes. The storm that occurred in Edwards and Real Counties on April 12, probably surpassed any previous record for this section of Texas.

This tornado first made its appearance on the Edwards Plateau, in the north-central portion of Edwards County, where it hit and practically destroyed the town of Rock-springs, taking a toll of 72 lives and injuring 200 more. About 235 residence and business buildings were destroyed, and property damage amounted to \$1,230,000. But 12 houses were left standing and 6 of these were badly damaged.

The path of the tornado was first observed 3 miles north of Rocksprings. It moved southeastward, passing directly over the town, with a destructive diameter ranging from seven-eighths to $1\frac{1}{8}$ miles in width, and about 8 miles long. It apparently jumped a hilly broken section of 25 miles and came to earth again in the south-central portion of Real County, passed near Leakey, where two people were killed and five injured. Here the path had narrowed to about one-fifth of a mile. Still moving southeastward, it next hit about 15 miles farther on, near Utopia, in the northeast portion of Uvalde County, where several buildings were blown down, but as far as known no one was seriously injured.

The path of this storm is about 65 miles in length. Just how many miles of this distance that the tornado was sweeping the ground will never be known. It passed over a very sparsely settled section of the State, most of

its course being over rock hills with little vegetation. Houses are many miles apart and roads are few.

On April 19, an attempt was made to follow and map the path of the tornado from an airplane. In some ways this was disappointing. The first indications of the storm were seen 3 miles north of Rocksprings, where all trees were down; the path passed directly over the town, continued southeast for 5 miles beyond, approximately 8 miles in all, and then it was lost in rock hills.

The counterclockwise whirl of the wind-tossed debris made the air view one of unusual interest from a meteorological standpoint. Numbers of trees fell to the south and southeast, others fell to the east, and a few fell to the northeast and north. A rough estimate made while circling 2,500 feet above the tornado path indicated that 70 per cent fell to the south and southeast, 20 per cent fell to the east, and 10 per cent to the northeast and north. Debris from isolated houses on the south side of the town were strewn in a wide arc that curved counterclockwise. The town site of nearly a square mile revealed grim evidence of the terrific force of the tornado. Tangled wreckage was piled around the larger buildings, while acres of ground where lighter buildings stood were swept bare.

The path of the storm was followed with difficulty where trees were small and scattered, and it was entirely lost 5 miles southeast of Rocksprings, nor could any evidence be found that it came to earth between Rocksprings and the dry canyon of the Frio River. No attempt was made to map the storm path from Leakey to Utopia, but reliable information indicates that the path was 16 miles long and 200 to 300 yards wide.